

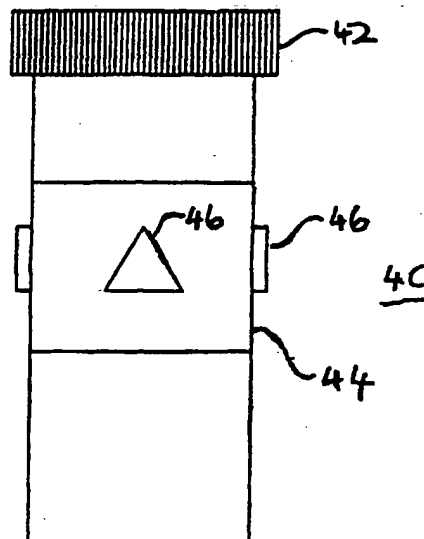
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<b>(21) International Application Number:</b> PCT/US00/09299 <b>(22) International Filing Date:</b> 8 April 2000 (08.04.00) <b>(30) Priority Data:</b> 60/129,822 16 April 1999 (16.04.99) US <b>(71)(72) Applicant and Inventor:</b> STURMAN, Leon [US/US]; Mailmark Enterprises, L.L.C., 8587 Canoga Avenue, Canoga Park, CA 91304 (US). <b>(74) Agent:</b> KLEINBERG, Marvin, H.; Kleinberg & Lerner, LLP, 2049 Century Park East, Suite 1080, Los Angeles, CA 90067 (US).	<b>(81) Designated States:</b> AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i>	

**(54) Title:** DISTINGUISHABLE MEDICAMENT CONTAINER**(57) Abstract**

Touch-distinguishable containers (40), touch-distinguishable collars (62) and caps (42) for containers (40), and touch-distinguishable fastenable tactile markers are described, having one or more protrusions (50), depressions (66), or symbols located on one or more surfaces thereof which are readily recognizable by touch; having adherent, adhesive, or encircling portions for securing to a surface of a container (40) or of a cap (42) for a container (40); optionally incorporating one or more cap-retaining tethers (74); optionally incorporating one or more container-clustering links which may optionally be enlarged or stiffened; optionally being formed of a transparent material; optionally incorporating visual markings including color or pattern for further facilitating identification of the marked article; optionally incorporating a removably attached, hole-punched duplicate marker useful for filing or carrying in a wallet.



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## DISTINGUISHABLE MEDICAMENT CONTAINER

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This application is a continuation-in-part of prior copending U.S. Application Ser. No. 60/129,822, filed April 16, 1999, the priority of which is claimed.

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### BACKGROUND OF THE INVENTION

#### Field of the Invention

The present invention relates to markers for containers and other articles, and more particularly to tactile markers for marking medicine bottles and the like in a personalized manner.

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#### Description of the Related Art

Most prescription medicines in the form of tablets, pills, or capsules are dispensed in uniform cylindrical containers with standardized caps. In recent years, many pharmacies provide a container-cap combination that is deemed "child-proof" so that children would not have ready access to potentially dangerous drugs and medications.

20

Conventionally, the container includes a label bearing the name of the patient, the name of the medication and the quantity and frequency of the dosage. The prior art has provided examples of containers which were specially configured to signal the presence of poisons or other dangerous substances. Other containers of the prior art had features that could signal the frequency of dosage. Yet others provided an indication of the quantity of pills or the like to be taken at each dose. U.S. Patent No. 4,883,180 describes a medicine container which uses a colored label and raised identification dots or nubs to represent the number of times that a medicine is to be taken per day.

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In households where more than one family member is being treated with prescription medications, the only way to tell for which patient the medicine is intended is to read the label. Labels are generally typed or printed with relatively small type which may be difficult to read, especially if the lighting is poor or the container has become stained. Further, in the case of older

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patients, their vision is less than optimum and there may be difficulty in reading the label to determine the identity of either the medication or the patient for whom it is prescribed.

5       The problem is especially acute when there are adults and children concurrently taking prescription medications or where older adults are on different medications or different strengths of the same medication. In these situations, one must rely entirely on the ability to read a label to determine what the medication is, the proper dosage and the patient for whom it is intended. The consequences of a mistake can be severe.

10       There is also the problem of family members who would like to be able to telephone home from work or from travel to remind a patient to take a medication. If the patient has impaired eyesight or is otherwise only marginally able to distinguish between medicine containers on the basis of printed words and numbers, the family member may have little confidence in the patient's ability to act as reminded, much less report back after doing so. Thus, there is also a need for a way to add distinguishing features to a medicament container to make it easier to distinguish and easier to describe.

15       It would serve the needs of the visually impaired to be able to identify individual medicines or at least to be able to distinguish as between medicines intended for themselves and those intended for others. Pharmacies and other dispensers of medication are rarely equipped to create labels that include information in Braille. What is needed, in addition to visually distinguishable features such as color and printed indicia, is a medicament container which can be configured so  
20       as to be readily identified and correlated, by the sense of touch, to a particular patient in a household of more than one patient.

#### SUMMARY OF THE INVENTION

25       It is an object of the invention to provide a container which can be readily associated with a particular patient in a household with more than one patient, preferably by sight or by touch, but at least by touch. It is a related object to provide a container which includes on its surface one or more tactile symbols which are commonly understood as signifying male and female, so that couples can conveniently distinguish their medicine containers. It is a related object to provide a medicine container that can be readily associated with children rather than adults on the basis of a  
30       surface feature indicative of whose medications are contained. It is another object of invention to provide a medicine container that can be associated with a particular patient in a household without relying on words and numbers printed on a label.

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It is an additional object of the present invention to provide such tactile distinguishing information either on a container, on a cap thereof, or on a collar or adherent pad which may be secured to a container or to a cap thereof.

5 It is an additional object to provide such tactile distinguishing information while also keeping a cap physically associated with a container, while keeping several containers clustered together, or both.

It is an additional object to provide such tactile distinguishing information while also providing an easily grasped surface attached to the container or other article.

10 It is an additional object to provide such tactile distinguishing information in combination with conspicuous visual features to provide an easily perceived, easily recognized, easily remembered, and easily described marking system for one or more medicament containers or similar articles.

15 It is an additional object of the present invention to provide a means by which a persons communicating orally, as by telephone, for example, can make better use of their senses to have higher confidence that they have a correct mutual understanding of which of several similar tangible objects they are referring to.

It is an additional object to provide such tactile distinguishing information while also helping to block the container or containers from falling into narrow spaces from which they might be difficult to retrieve.

20 In accordance with these objects and with others which will be described and which will become apparent, an exemplary embodiment of a touch-distinguishable container in accordance with the present invention includes a container having an inner volume, a closure, and a tactile marker defined in an outer surface of the container and closure.

25 In another exemplary embodiment, the tactile marker defines a symbol capable of being perceived by touch, such as, for example, a triangle, a rectangle, a circle, or a commonly understood symbol for male or female gender. This embodiment is well suited for couples sharing a bedside table. In another exemplary embodiment, the tactile marker is impressed in the outer surface. In another exemplary embodiment, the tactile marker may comprise one or more depressions or protrusions.

30 Also in accordance with the same objects, an exemplary embodiment of a touch-distinguishable collar for a container in accordance with the present invention comprises a collar having a surface and being so constructed as to fit snugly about a container, the surface having a tactile

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marker placed thereon. The collar may be secured to a bottle of medicine, thereby identifying the bottle and distinguishing it from others until it is discarded, at which time the collar may be transferred to another bottle. In another exemplary embodiment, that surface defines a symbol capable of being perceived by touch, such as, for example, a triangle, a rectangle, and a circle. In  
5 another exemplary embodiment, the tactile marker is placed on a peripheral surface of the collar.

In another exemplary embodiment, the touch-distinguishable collar includes an associated cap which also includes the same tactile marker in its surface as that defined on the collar, making it easy to keep caps correctly associated with bottles. In another exemplary embodiment, the touch-distinguishable collar has a tether attached to it and a cap attached to the tether, reducing the  
10 chance that the cap will be lost or confused with other caps.

In another exemplary embodiment, the touch-distinguishable collar includes a tether attached to the collar and a cap collar attached to the tether, the cap collar being so constructed as to fit snugly about a cap of the container, providing a convenient, re-usable way of not only identifying a particular container, but also keeping the cap with the retainer. In another exemplary  
15 embodiment, the touch-distinguishable collar is formed of a transparent material, making it possible to read a label through the collar even if the collar covers part of the label.

In another exemplary embodiment, the touch-distinguishable collar has a tactile marker placed on a surface of the tether so that it is possible to identify a particular bottle of medicine by feeling the tether. In another exemplary embodiment, the touch-distinguishable collar includes a  
20 link projecting from the collar and a companion collar attached to the link. This embodiment keeps several bottles together and, to some extent, guards against the frustrating experience of dropping a small bottle of pills into a narrow space behind a bed or bedside table. In another exemplary embodiment, the touch-distinguishable collar includes a link projecting from the collar, a companion collar attached to the link, a companion tether attached to the companion collar, and  
25 a companion cap collar attached to the companion tether. This embodiment keeps several bottles and their caps together.

Also in accordance with the same objects, an exemplary embodiment of a touch-distinguishable cap for a container comprises a container-fitting closure body having a surface and a tactile marker on the surface capable of being recognized by touch. In another exemplary  
30 embodiment, the touch-distinguishable cap defines a symbol capable of being perceived by touch, such as, for example, a triangle, a rectangle, and a circle.

In another exemplary embodiment, the touch-distinguishable cap further comprises a tether attached to the cap and a collar attached to the tether, the collar being so constructed as to

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fit snugly about the container to keep the cap with the container. In another exemplary embodiment, the touch-distinguishable cap includes a tether attached to the cap and a collar attached to the tether, the collar being so constructed as to fit snugly about the container, the collar having a surface defining a symbol capable of being perceived by touch, the symbol being the same symbol as that on the cap, thereby more clearly associating cap and bottle.

Also in accordance with the same objects, an exemplary embodiment of a fastenable tactile marker for marking an article comprises an adherent portion adapted to be securable to an article and a tactile marking portion attached to the adherent portion, the tactile marking portion being capable of being recognized by touch. This embodiment may be attached to a bottle or other article previously acquired. In another exemplary embodiment, the tactile marking portion defines a symbol capable of being perceived by touch, such as, for example, a triangle, a rectangle, and a circle. In another exemplary embodiment, the adherent portion comprises an adhesive surface which may be stuck onto the article to be marked.

In another exemplary embodiment, the fastenable tactile marker has a tether attached to the adherent portion and a second adherent portion attached to the tether. The second adherent portion can be used, for example, to attach a second bottle of medicine to the first, or to attach a cap to the bottle. In a related exemplary embodiment, a second tactile marking portion is attached to the second adherent portion, the tactile marking portion and the second tactile marking portion each defining a symbol capable of being perceived by touch, the same symbol being defined in both, thereby not only identifying several bottles with one person but also keeping them together. In another related embodiment, the tactile marking portion is located on the tether to permit identification by merely feeling the tether.

In another exemplary embodiment, the adherent portion comprises a collar, the collar being so constructed as to fit snugly about the article so that the tactile marker may be installed on and removed from a previously-acquired bottle. In another exemplary embodiment, the fastenable tactile marker is formed of a transparent material so that a label may be read through the tactile marker.

In another exemplary embodiment, the fastenable tactile marker having a tether further comprises a link attached to the adherent portion, a companion adherent portion attached to the link, a companion tether attached to the companion adherent portion, and a companion second adherent portion attached to the companion tether. This embodiment keeps several bottles and caps clustered together and identifies them with one person.

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In another exemplary embodiment, the adherent portion and second adherent portion define a first symbol capable of being perceived by touch and the companion adherent portion and companion second adherent portion define a second symbol capable of being perceived by touch, the second symbol being distinguishable by touch from the first symbol. This embodiment clusters  
5 several bottles of medicine together while making them distinguishable from one another by touch.

Also in accordance with the same objects, a plurality of touch-distinguishable containers each has an inner volume, a closure, and a tactile marker defined in an outer surface of the container and closure. Each of the plurality of containers has a tactile marker which is distinguishable from the tactile markers of every other of the plurality of containers and closures by  
10 touch, making it convenient to tell the bottles apart by touch.

Also in accordance with the same objects, an exemplary container, collar, cap and fastenable tactile marker, or plurality of same in accordance with the present invention comprises an associated buddy marker which may be kept by a family member or health care worker or which may be placed in a chart or carried in a wallet. Optionally, the associated buddy marker is  
15 initially attached to the tactile marker and easily separable therefrom.

The present invention provides, among other things, a medicament container which can be configured so as to be readily identified with a particular patient in a household of more than one patient. A plurality of embossed, stamped or engraved patterns and styles and/or colors can be employed to make a container either sex specific or unique in other characteristics so that a  
20 member of the household can immediately distinguish the medicines of one patient from all of the medicines intended for others in the household, either by sight or by touch, and especially by touch.

It is an advantage of the present invention that it provides a means by which a family member can orally identify a particular article (such as a medicine container) to a patient by specifying a feature of that article which is conspicuously perceptible via a first sensory modality and the patient can report having acted with respect to that article and, additionally, report a feature of that article which is conspicuously perceptible via a second sensory modality. This provides a means by which the family member can test the correctness of the patient's response to the instructions by challenging the patient to report a feature which the family member has not  
25 mentioned and which the patient can learn only by touching or looking at the correct article. This advantage is better provided by those exemplary embodiments of the present invention that associate each of one or more conspicuously different visual features with only one of one or more conspicuously different tactile markers. Indeed, this advantage might be best provided by those  
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exemplary embodiments in which the visual and tactile markers applied to a particular article in accordance with the present invention have dissimilar verbal descriptions.

While the problem might be ameliorated if medicaments could be stored in individual medicine cabinets, the problem is exacerbated if a single medicine cabinet serves an entire family or, if traveling, all medicines are packed together. The problem of determining whose medication is whose can be a serious one and one with potentially dangerous consequences if mistakes are made.

Conventionally, the colors pink and blue have been associated with female and male children, respectively. Accordingly, a pink or blue cap on a medicine container could be used to visually distinguish medicine intended for females or males. In addition, tactile identifiers can be provided, such as engraved or embossed letters. For example, an "X" or "O" could be utilized. Other, easily recognizable shapes or patterns could be employed, as well.

In a preferred embodiment, the cap of the container is individualized with a color or a tactile pattern. In alternative embodiments, the body of the container can contain the tactile patterns although it is believed that the use of the cap is preferred in that the cost of providing a plurality of individualized containers and the problems of inventorying an assortment would present problems of cost and complexity to the dispensary. At the present time, alternative caps are provided when a "childproof" closure is not desired.

In another embodiment, distinctive overlays could be provided which fit over a standard cap. Such overlays could be colored and could include tactile elements. One possibility is using a series of concave elements for the female patient and convex elements for the male. In addition, the universal shapes currently being used to distinguish public bathrooms - the circle for women and the triangle for men could also be employed.

In yet another, alternative embodiment, a collar or ring could be provided to fit over the body of the container and which would have the distinctive colors or tactile shapes that would identify the medicines of one family member from those intended for a different family member. The dispensary could inventory an assortment of unique collars or bands from which a selection could be made.

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**BRIEF DESCRIPTION OF THE DRAWINGS**

For a further understanding of the objects and advantages of the present invention, reference should be had to the following detailed description, taken in conjunction with the accompanying drawing, in which like parts are given like reference numbers and wherein:

5 Figs. 1-4 are side views of touch-distinguishable containers in accordance with the present invention;

Fig. 5 is a side view of a touch-distinguishable collar in accordance with the present invention;

10 Fig. 6 is a top sectional view of a touch-distinguishable collar in accordance with the present invention;

Fig. 7 is a side view of a touch-distinguishable collar in accordance with the present invention;

Fig. 8 is a side view of a touch-distinguishable collar in accordance with the present invention;

15 Fig. 9 is a side view of a touch-distinguishable collar in accordance with the present invention;

Fig. 10 is a top view of a touch-distinguishable collar in accordance with the present invention;

20 Fig. 11 is a side view of a touch-distinguishable collar in accordance with the present invention;

Fig. 12 is a side view of a touch-distinguishable collar in accordance with the present invention;

Fig. 13 is a side view of a touch-distinguishable collar in accordance with the present invention;

25 Figs. 14-16 are top views of touch-distinguishable caps in accordance with the present invention;

Fig. 17 is a side sectional view of a touch-distinguishable cap in accordance with the present invention;

30 Fig. 18 is a side view of a fastenable tactile marker in accordance with the present invention;

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Fig. 19 is a side view, as seen in plane with an edge, of a fastenable tactile marker in accordance with the present invention, showing a front view of a second tactile marker tethered thereto;

5 Fig. 20 is a side view of a fastenable tactile marker in accordance with the present invention, showing a face view of a second tactile marker tethered thereto and an edge view of a tactile marking portion located on a tether surface;

Fig. 21 is a front view of a fastenable tactile marker in accordance with the present invention, showing a companion tactile marker linked thereto; and

10 Fig. 22 is a front view of a fastenable tactile marker in accordance with the present invention, showing a companion tactile marker linked thereto.

Fig. 23 is a front view of a fastenable tactile marker in accordance with the present invention, showing a companion tactile marker linked thereto

#### DESCRIPTION OF THE PREFERRED EMBODIMENTS

15 The invention will now be described with reference to Fig. 1, which illustrates in side view a preferred embodiment of a touch-distinguishable container in accordance with the present invention shown generally by the reference number 40. The distinguishable medicament container has a cap 42 and a surface 44. A raised tactile marker 46 is formed in the surface 44. A person grasping the container 40 in the dark can readily feel and recognize the tactile marker. The tactile  
20 marker 46 of Fig. 1 defines a triangle. Fig. 2 illustrates another preferred embodiment of a touch-distinguishable container in accordance with the present invention in which the tactile marker 46 defines a circle. Because the shapes are not only conspicuous to the touch but also easily distinguishable from one another by touch, couples sharing a bedside table may, for example, adopt the convention of labeling one partner's medicine bottles with a triangle and the other's with  
25 a circle. With reference to Figs. 3 and 4, additional preferred embodiments of a touch-distinguishable container employ a tactile marker 46 defining an array of protrusions 50 (Fig. 3) or depressions 52 (Fig. 4). These arrangements can cover a large portion of the area of the container, thus making it possible to recognize them at nearly any point on its surface.

30 With reference to Figs. 5 through 7, a preferred embodiment of a touch-distinguishable collar according to the present invention, shown generally at 60, has a collar body 62, a collar peripheral surface 64 defining depressions 66 (Fig. 5) or protrusions (Figs. 6 and 7), and a collar inner surface 70. The collar inner surface 70 has a diameter somewhat smaller than that of a

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range of diameters of bottles for which the collar 60 is intended. The collar body 62 is formed of a material having the appropriate elasticity and surface properties that, once stretched onto the container surface 44, the collar body 62 will securely grip the container surface 44 and remain there until forcibly removed. Polymers, paper products, fabrics, and composites of these can be designed with appropriate characteristics. The preferred embodiment shown in Fig. 7 includes a cap tactile marker 72 having a plurality of protrusions 50 identical to those located on the collar peripheral surface 64, making it easy for an individual to associate the cap with the container and collar by touch.

With reference to Fig. 8, a preferred embodiment of a touch-distinguishable collar in accordance with the present invention includes a tether 74 attached to the collar body 62 and to the cap 42. Figs. 9 and 10 show a related preferred embodiment including a cap collar 76 attached to the tether 47. The cap collar 76 is designed to be removably secured over the cap 42 in much the same way as the collar body 62 is secure on the container surface 44. The cap collar 76 may be made slightly larger in diameter than the collar body 62 in order to accommodate the larger diameter of the cap 42. By applying this preferred embodiment of the touch-distinguishable collar to a container and cap, an individual can readily identify the container by touch and avoid losing the cap or confusing the cap with caps from other containers. Fig. 11 shows a related preferred embodiment in which the protrusions 50 are located on the tether 74 that attaches the cap 42 to the collar body 62. An individual can identify the marked container by feeling the tether.

With reference to Fig. 12, another preferred embodiment of a touch-distinguishable collar in accordance with the present invention includes a link 78 attached to the collar body 62. A companion collar 80 is attached to the link 78. The companion collar is designed to be attached to a container surface in the same manner as is the collar body 62. This preferred embodiment is touch-distinguishable and enables an individual to keep several containers clustered together. Clustered containers are not only less likely to be lost, but also less likely to fall into small spaces from which they are difficult to retrieve. Fig. 13 shows a related preferred embodiment in which a link 78 joins two collar bodies 62, each of which has a tether 74 to which is attached a cap collar 76. This embodiment is touch-distinguishable, clusters several containers together, and keeps the caps with the containers. This particular preferred embodiment employs the same protrusions 50 to mark both collar bodies 62 and both cap collars 76. An alternative embodiment, not shown in Fig. 13, would employ a second, distinguishable marker (depressions or parallel ridges, for example) on surfaces of the collar body 62 and cap collar 76 that are to be placed on each containers, thereby enabling an individual to distinguish between the containers that are clustered together.

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With reference to Figs. 14 and 15, a preferred embodiment of a touch-distinguishable cap for a container is shown generally by the reference number 90 and includes a cap surface 92 having a tactile marker 94. The tactile marker 94 defines a symbol 96 (Fig. 14), 98 (Fig. 15) capable of being recognized by touch. Figs. 16 (top view) and 17 (side sectional view) show another preferred embodiment of a touch-distinguishable cap in accordance with the present invention in which the cap surface 92 defines an array of depressions 52 which are readily recognizable by touch.

With reference to Fig. 18, a preferred embodiment of a fastenable tactile marker in accordance with the present invention is shown generally by the reference number 110 and includes an adherent portion 112 adapted to be securable to a surface 44 of an article such as the medicine container that is illustrated. Attached to the adherent portion 112 is a tactile marking portion 114 which defines an array of depressions 52 which are readily recognizable by touch. Fig. 19 illustrates a related preferred embodiment of a fastenable tactile marker in accordance with the present invention which includes an adherent portion 112 (shown as viewed from an edge thereof), a tactile marking portion 114 defining a plurality of protrusions 50, and a tether 74 which attaches the adherent portion 112 to a second adherent portion 116 (shown as viewed from the top or face thereof). Attached to the second adherent portion 116 is a second tactile marking portion 118 which defines a plurality of protrusions 50. The adherent portion 112 is attachable to a surface of a container, such as a medicine container. The second adherent portion 116 is attachable to a surface of a container closure, such as a cap of a medicine container. This preferred embodiment marks the closure and the container and keeps them together. An adhesive coating is an exemplary means of attaching the adherent portions 112 and 116 to surfaces. Other examples include a collar which fastens tightly enough about a container surface to remain there until forcibly removed, and alternative grasping, clamping, or tying arrangements.

Fig. 20 illustrates another preferred embodiment of a fastenable tactile marker in accordance with the present invention, in which the adherent portion 112 is formed of a transparent material which permits an individual to read print on a container surface after fastening the marker. Also illustrated in Fig. 20 is a related preferred embodiment in which a plurality of protrusions 50 are defined on the tether 74. Especially if the shape of the tactile marking portion 114 is such as to cause optical distortion, it might be preferable to locate the tactile marking portion 114 on the tether 74 as shown in Fig. 20.

Fig. 21 illustrates another preferred embodiment of a fastenable tactile marker in accordance with the present invention, in which a link 78 is attached to the adherent portion 112 and a companion adherent portion 120 is attached to the link 78. To each of the adherent portions

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112 and 120 is attached a tether 74. A second adherent portion 116 is tethered to adherent portion 112. A companion second adherent portion 122 is tethered to companion adherent portion 120. A tactile marking portion 114 is located on each tether 74. The adherent portion 112 and companion adherent portion 120 are attachable to surfaces of first and second containers (not shown in Fig. 5 21), while the second adherent portion 116 and companion second adherent portion 122 are attachable to the caps of the respective containers. In this preferred embodiment, each of the tactile marking portions 114 defines a plurality of protrusions 50 which are readily recognizable by touch. It will be appreciated that a tactile marking portion may be located on any of the adherent portions 112, 116, 120, and 122 as well. Also in this preferred embodiment, both of the 10 tactile marking portions 114 define the same plurality of protrusions 50.

In a related alternative embodiment, shown in Fig. 22, the tactile marking portions located on adherent portions 120 and 122 define a symbol (triangle) different from that defined by the tactile marking portion located on adherent portions 112 and 116 (circle), enabling an individual to distinguish by touch between the two containers that are linked together by installation of the 15 adherent portion 112 on one container and the installation of companion adherent portion 120 on the other. Additionally, in the embodiment shown in Fig. 22 (and other embodiments), the link 78 may be elongated or stiffened. Either elongation or stiffening, or both in combination, can provide an enlarged surface for a physically impaired individual to grasp, and can also make it more difficult for the containers to fall into a narrow space from which an individual with physical 20 impairments might not be able to retrieve them.

It will now be pointed out that in certain exemplary embodiments of a touch-distinguishable container, cap, collar or fastenable tactile marker in accordance with the present invention, color or color patterns may be employed to further some of the objects of the invention. Such exemplary embodiments involving colors are perhaps more aptly described verbally here than 25 represented in black and white in the Drawing Figures. As an example, suppose that a family member, who is caring for a house-bound patient and is temporarily away from home, telephones the patient to remind the patient to take one of several medications which are within the patient's ready access. Suppose further that, because the patient's cognition or communicative abilities are impaired, the family member seeks added assurance that the patient has retrieved the correct 30 medication.

In this situation, an exemplary embodiment of the tactile marker or tactile marking portion in accordance with the present invention includes a plurality of readily palpable protrusions and is also colored bright yellow. The family member can instruct the patient, "Pick up the yellow bottle." When the patient reports having picked up a yellow bottle, the family member can then

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say, "Feel the side of the bottle," or "Feel the string on the bottle," or, simply, "Feel the bottle." The family member can then ask the patient, "What does it feel like?" The patient might be in a forgetful state and might make a confused, passive attempt to accommodate the family member by parroting back, "Yes, OK, the yellow bottle" even when actually handling a different bottle or no bottle at all. However, if the patient is highly this forgetful or confused, he or she will not likely be able to correctly report the tactile features of the bottle without first handling it and feeling those features. Thus, the family member can use the color of the marker in accordance with the present invention in combination with its tactile features to challenge and confirm the patient's compliance with oral instructions. This advantage is better provided where the visible and tactile features that are to be associated with a single marked article do not share a common verbal descriptor such as "striped" or "polka dotted." The present example, which employs the color bright yellow in combination with a tactile pattern of a plurality of protrusions, satisfies this criterion. In order to correctly report feeling the protrusions that the family member already knows are on the bright yellow bottle, the patient will either have to see the yellow bottle, handle it, feel the protrusions, and report what he or she feels, or else will have to remember that the yellow bottle has the protrusions. While the family member might not be able to know which of these conditions accounts for the patient's reply consistent with the patient's handling the bright yellow bottle with the protrusions, such a consistent reply does give the family member an indication that at least one of these has occurred, thereby providing a degree of added confidence that the patient has complied with the instruction.

The same principle can be applied as between an adult and a small child. In the case of the child, sensory abilities are typically most acute, while verbal abilities, and in particular the ability to accurately report having followed an oral instruction, might not yet have developed to a reliable degree.

A related exemplary embodiment of a fastenable tactile marker in accordance with the present invention includes an associated buddy marker which may be provided physically separate from the tactile marker or which may alternatively be provided physically attached but easily separable. Fig. 23 shows such an exemplary embodiment in which the associated buddy marker 124 is attached to the tactile marker by a frangible connector 126. The associated buddy marker bears the same tactile feature, visual feature, or both, as on the marker that is affixed to the marked article. This exemplary embodiment has the advantage that the tactile marker and the associated buddy marker can be provided together to the user, who can then further mark or label both as he or she sees fit and can then tear off the associated buddy marker and keep it for quick reference.

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Optionally, the associated buddy marker also displays a copy of printed verbal information also displayed on the tactile marker or on the marked article, such as the nature of the article, the name of the patient, the patient's telephone number, and the like. In the exemplary embodiment shown in Fig. 23, the associated buddy marker is approximately the size of a business card or credit card which may easily be carried in a wallet, and is punched with one or more holes 128 for easy attachment to a chart or ring binder.

While the foregoing detailed description has described several embodiments of a touch-distinguishable container and cap and a fastenable tactile marker in accordance with the present invention, it is to be understood that the above description is illustrative only and not limiting of the disclosed invention. For example, more than two articles or containers may be joined by an embodiment of the present invention. Indeed, it will be appreciated that the embodiments discussed above and the virtually infinite embodiments that are not mentioned could easily be within the scope and spirit of the present invention. Thus, the present invention is to be limited only by the claims as set forth below.

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## CLAIMS

What is claimed is:

1. A touch-distinguishable container, comprising:

5 a container having an inner volume, a closure, and a tactile marker defined in an outer surface of said container and closure.

2. A touch-distinguishable container as set forth in claim 1, wherein said tactile marker defines a symbol capable of being perceived by touch.

3. A touch-distinguishable container as set forth in claim 1, wherein said tactile marker is impressed in said outer surface and is capable of being perceived by touch.

10 4. A touch-distinguishable container as set forth in claim 1, wherein said tactile marker comprises a protrusion.

5. A touch-distinguishable container as set forth in claim 1, wherein said tactile marker comprises a depression.

15 6. A touch-distinguishable container as set forth in claim 2, wherein said symbol is selected from the group consisting of a triangle, a rectangle, a circle, and the commonly understood symbols for male and female.

7. A touch-distinguishable container as set forth in claim 1, wherein said tactile marker comprises a plurality of depressions.

20 8. A touch-distinguishable container as set forth in claim 1, wherein said tactile marker comprises a plurality of protrusions.

9. A touch-distinguishable collar for a container, comprising:

a collar having a surface and being so constructed as to fit snugly about a container;

said surface having a tactile marker placed thereon.

25 10. A touch-distinguishable collar for a container as set forth in claim 9, wherein said surface defines a symbol capable of being perceived by touch.

11. A touch-distinguishable collar for a container as set forth in claim 10, wherein said symbol is selected from the group consisting of a triangle, a rectangle, and a circle.

12. A touch-distinguishable collar for a container as set forth in claim 9, wherein said surface is a peripheral surface of said collar.

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13. A touch-distinguishable collar for a container as set forth in claim 10, further comprising a cap, said cap having a surface, said cap surface including a tactile marker defining the same symbol as that defined on said collar.

5 14. A touch-distinguishable collar for a container as set forth in claim 9, further comprising a tether attached to said collar and a cap attached to said tether.

15. A touch-distinguishable collar for a container as set forth in claim 9, further comprising a tether attached to said collar and a cap collar attached to said tether, said cap collar being so constructed as to fit snugly about a cap of the container.

10 16. A touch-distinguishable collar for a container as set forth in claim 9, wherein said collar is formed of a transparent material.

17. A touch-distinguishable collar for a container as set forth in claim 15, wherein a tactile marker is placed on a surface of said tether.

18. A touch-distinguishable collar for a container as set forth in claim 9, further comprising a link projecting from said collar and a companion collar attached to said link.

15 19. A touch-distinguishable collar for a container as set forth in claim 15, further comprising a link projecting from said collar, a companion collar attached to said link, a companion tether attached to said companion collar, and a companion cap collar attached to said companion tether.

20 20. A touch-distinguishable cap for a container, comprising:  
a container-fitting closure body having a surface; and  
a tactile marker on said surface capable of being recognized by touch.

21. A touch-distinguishable cap for a container as set forth in claim 20, wherein said surface defines a symbol capable of being perceived by touch.

25 22. A touch-distinguishable cap for a container as set forth in claim 21, wherein said symbol is selected from the group consisting of a triangle, a rectangle, and a circle.

23. A touch-distinguishable cap for a container as set forth in claim 20, further comprising a tether attached to said cap and a collar attached to said tether, said collar being so constructed as to fit snugly about the container.

30 24. A touch-distinguishable cap for a container as set forth in claim 21, further comprising a tether attached to said cap and a collar attached to said tether, said collar being so constructed as to fit snugly about the container.

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structed as to fit snugly about the container, said collar having a surface defining a symbol capable of being perceived by touch, said symbol being the same symbol as that on said cap.

25. A fastenable tactile marker for marking an article, comprising:

an adherent portion adapted to be securable to an article; and

5 a tactile marking portion attached to said adherent portion, said tactile marking portion being capable of being recognized by touch.

26. A fastenable tactile marker as set forth in claim 25, wherein said tactile marking portion defines a symbol capable of being perceived by touch.

27. A fastenable tactile marker as set forth in claim 26, wherein said symbol is selected  
10 from the group consisting of a triangle, a rectangle, and a circle.

28. A fastenable tactile marker as set forth in claim 25, wherein said adherent portion comprises an adhesive surface.

29. A fastenable tactile marker as set forth in claim 25, further comprising a tether attached to said adherent portion and a second adherent portion attached to said tether.

15 30. A fastenable tactile marker as set forth in claim 29, further comprising a second tactile marking portion attached to said second adherent portion, said tactile marking portion and said second tactile marking portion each defining a symbol capable of being perceived by touch, the same symbol being defined in both.

31. A fastenable tactile marker as set forth in claim 29, wherein said tactile marking  
20 portion is located on said tether.

32. A fastenable tactile marker as set forth in claim 25, wherein said adherent portion comprises a collar, said collar being so constructed as to fit snugly about the article.

33. A fastenable tactile marker as set forth in claim 25, wherein said fastenable tactile marker is formed of a transparent material.

25 34. A fastenable tactile marker as set forth in claim 29, further comprising a link attached to said adherent portion, a companion adherent portion attached to said link, a companion tether attached to said companion adherent portion, and a companion second adherent portion attached to said companion tether.

30 35. A fastenable tactile marker as set forth in claim 34, wherein said adherent portion and second adherent portion define a first symbol capable of being perceived by touch and said companion adherent portion and companion second adherent portion define a second symbol

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capable of being perceived by touch; said second symbol being distinguishable by touch from said first symbol.

36. A plurality of touch-distinguishable containers, comprising:

a plurality of containers each having an inner volume, a closure, and a tactile marker defined in an outer surface of said container and closure;

each of said plurality of containers having a tactile marker which is distinguishable from said tactile markers of every other of said plurality of containers and closures by touch.

37. A fastenable tactile marker as set forth in claim 25, further comprising a link attached to said adherent portion and a companion adherent portion attached to said link, said link being rigid.

38. A fastenable tactile marker as set forth in claim 25, further comprising a link attached to said adherent portion and a companion adherent portion attached to said link, said fastenable tactile marker being sized to fit articles of a predetermined size range, said link being enlarged so as to have at least one dimension greater than the greatest dimension of the largest of said articles in said size range.

39. A fastenable tactile marker as set forth in claim 1, further comprising a conspicuous visual marker which does not comprise a geometric symbolic representation of the tactile marker.

40. A fastenable tactile marker as set forth in claim 1, further comprising a detachable associated buddy marker which comprises at least one of a tactile feature and a visual feature also possessed by said tactile marker.

41. A fastenable tactile marker as set forth in claim 9, further comprising a conspicuous visual marker which does not comprise a geometric symbolic representation of the tactile marker.

42. A fastenable tactile marker as set forth in claim 9, further comprising a detachable associated buddy marker which comprises at least one of a tactile feature and a visual feature also possessed by said tactile marker.

43. A fastenable tactile marker as set forth in claim 20, further comprising a conspicuous visual marker which does not comprise a geometric symbolic representation of the tactile marker.

44. A fastenable tactile marker as set forth in claim 20, further comprising a detachable associated buddy marker which comprises at least one of a tactile feature and a visual feature also possessed by said tactile marker.

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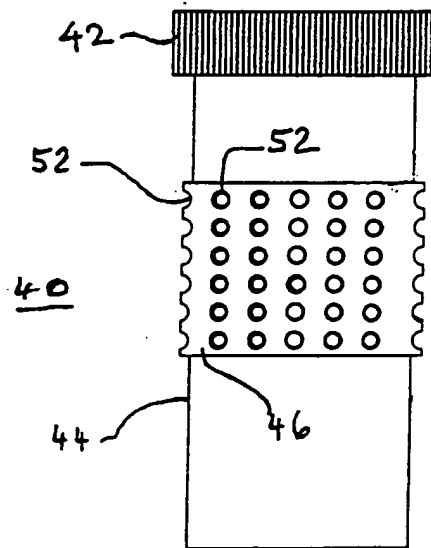
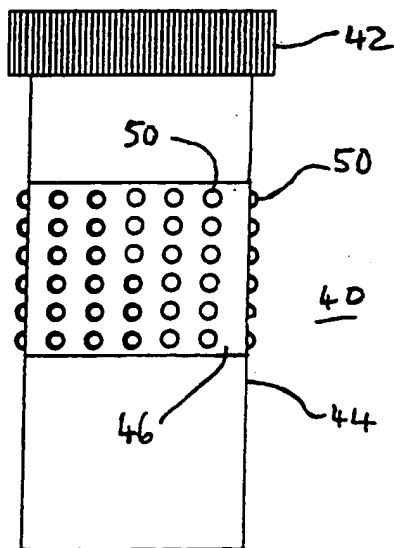
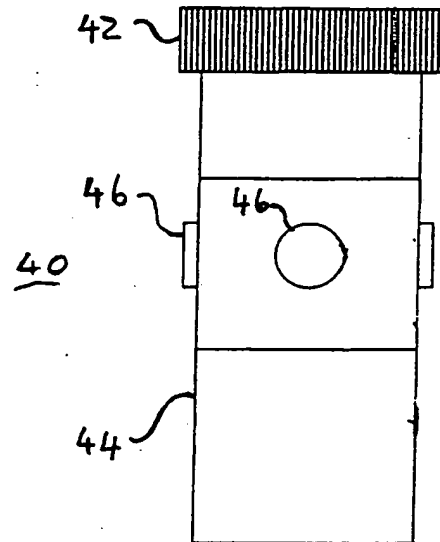
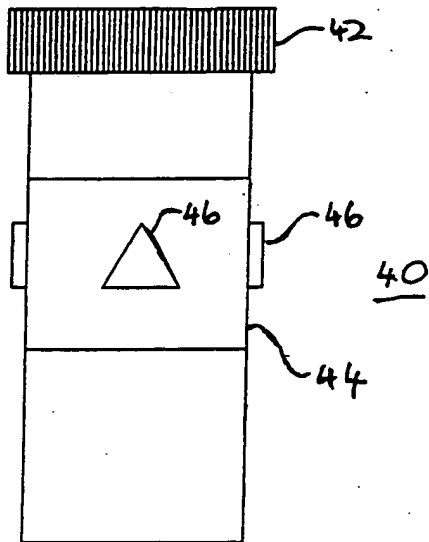
45. A fastenable tactile marker as set forth in claim 25, further comprising a conspicuous visual marker which does not comprise a geometric symbolic representation of the tactile marker.

46. A fastenable tactile marker as set forth in claim 25, further comprising a detachable associated buddy marker which comprises at least one of a tactile feature and a visual feature also  
5 possessed by said tactile marker.

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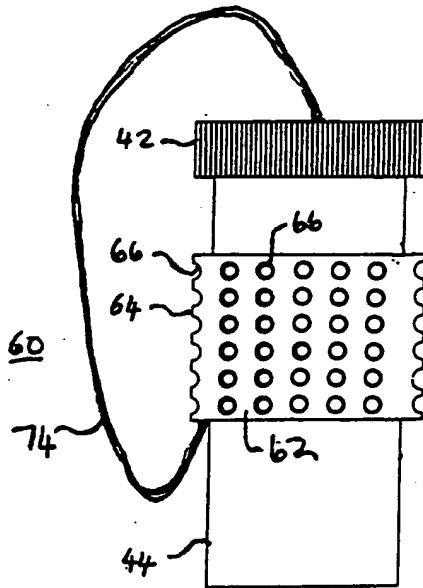


Fig. 8

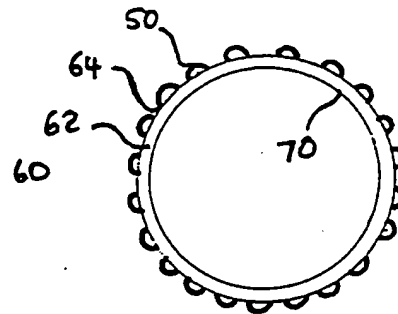


Fig. 6

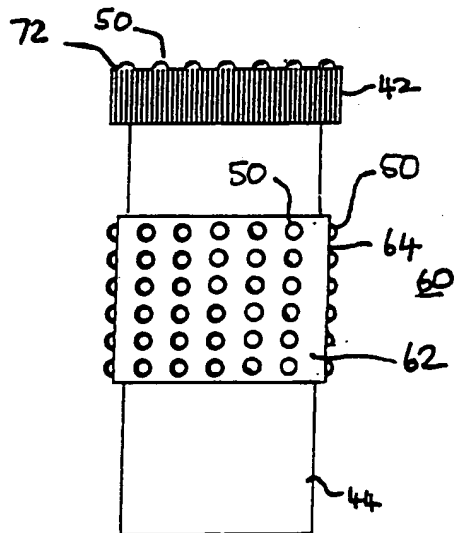


Fig. 7

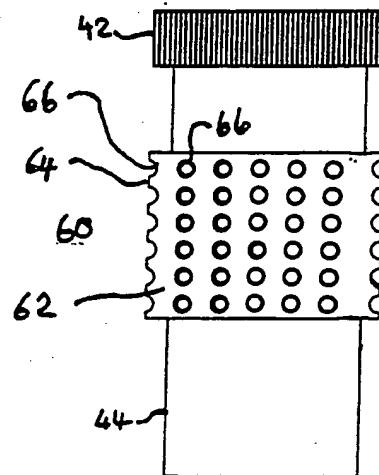


Fig. 5

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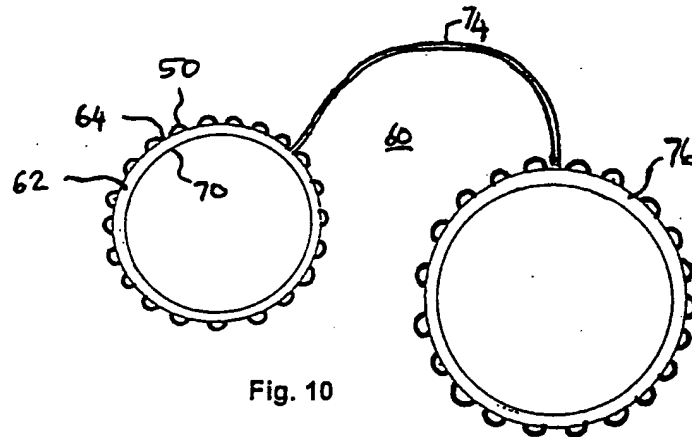


Fig. 10

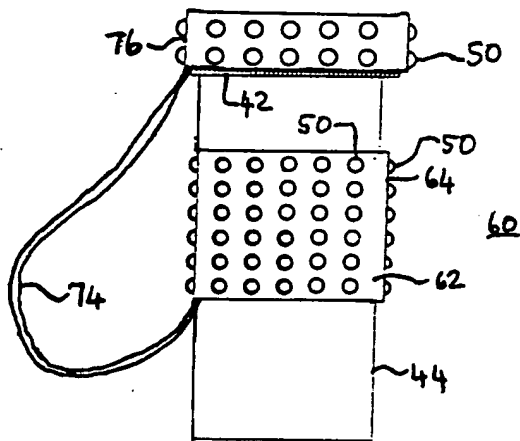


Fig. 9

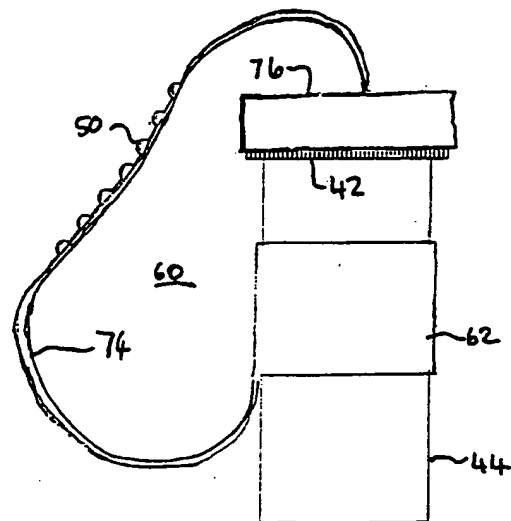


Fig. 11



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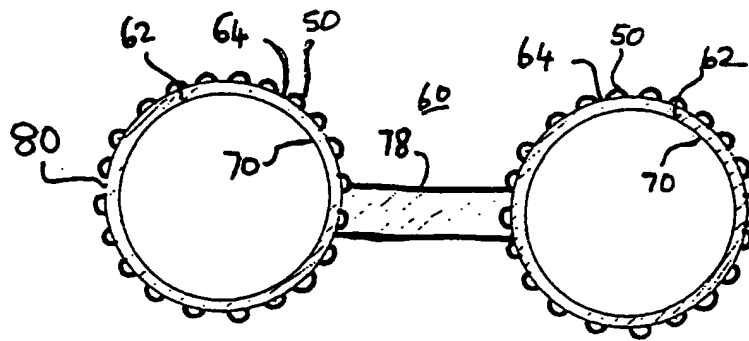


Fig. 12

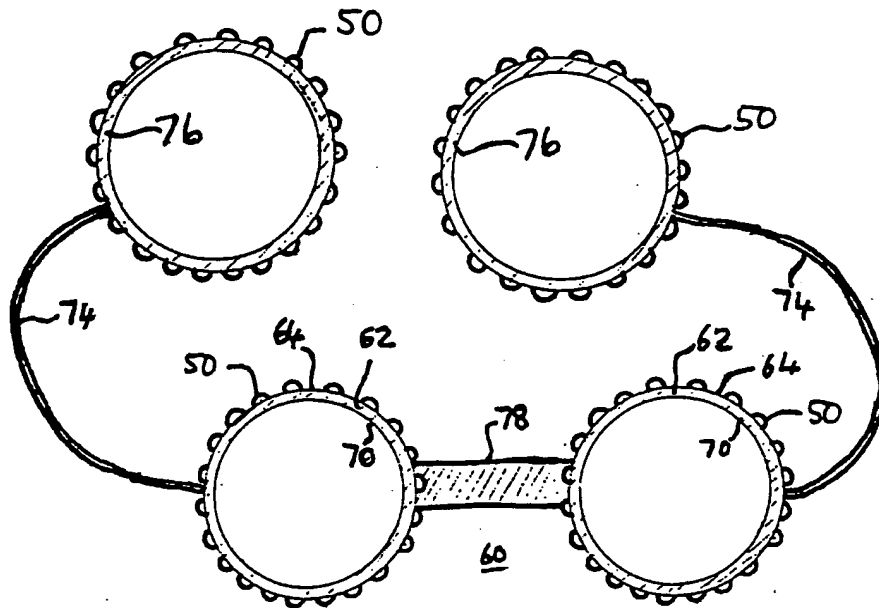


Fig. 13

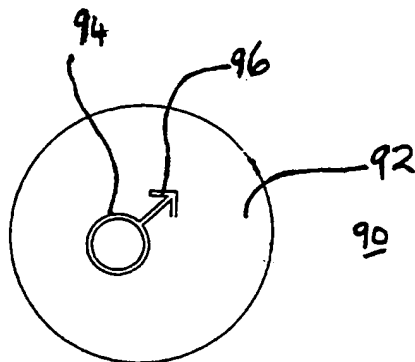


Fig. 14

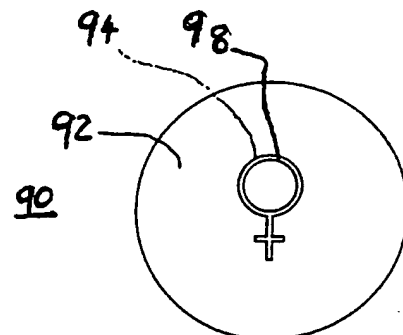


Fig. 15

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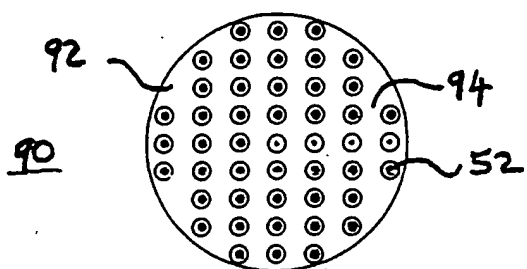


Fig. 16

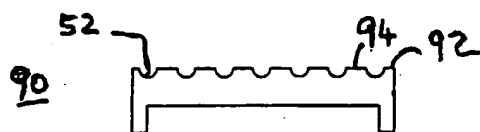


Fig. 17

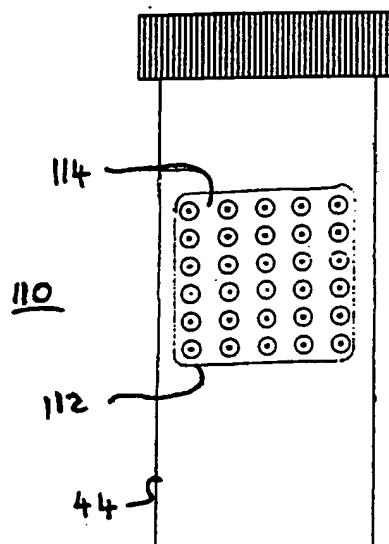


Fig. 18

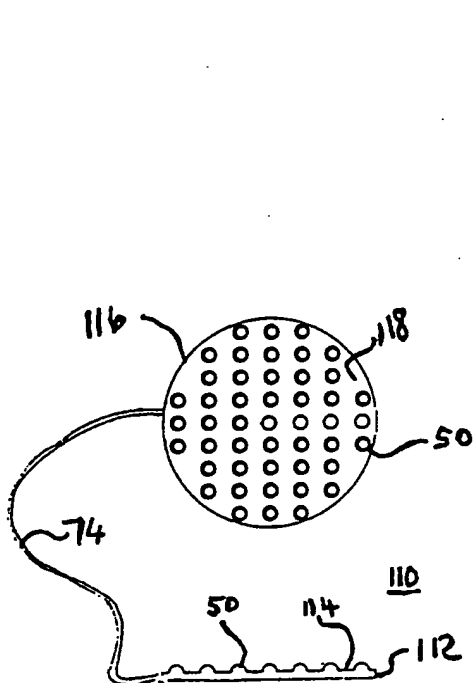


Fig. 19

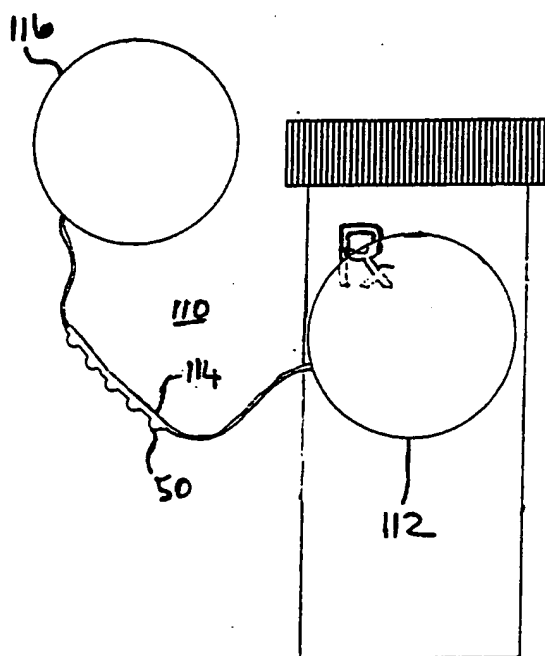


Fig. 20

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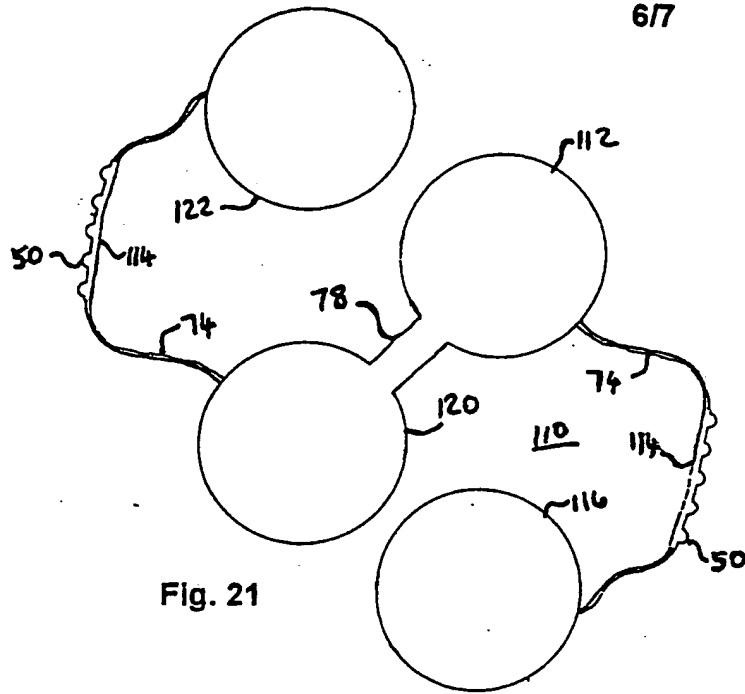


Fig. 21

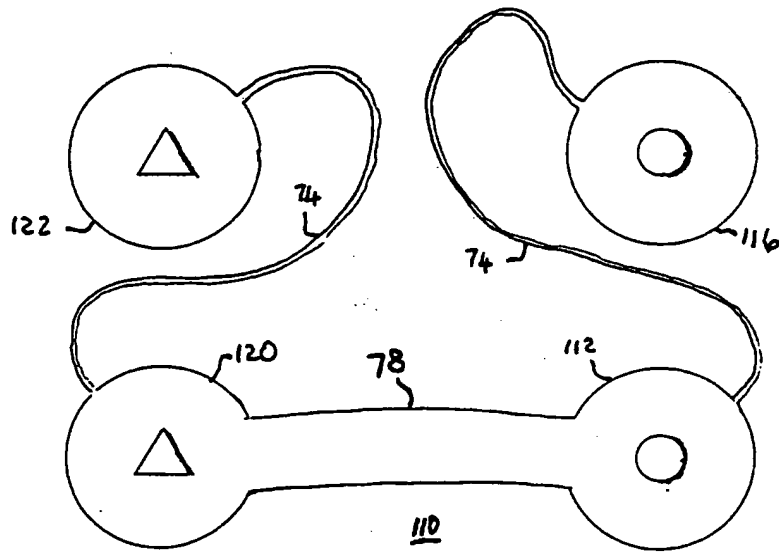


Fig. 22

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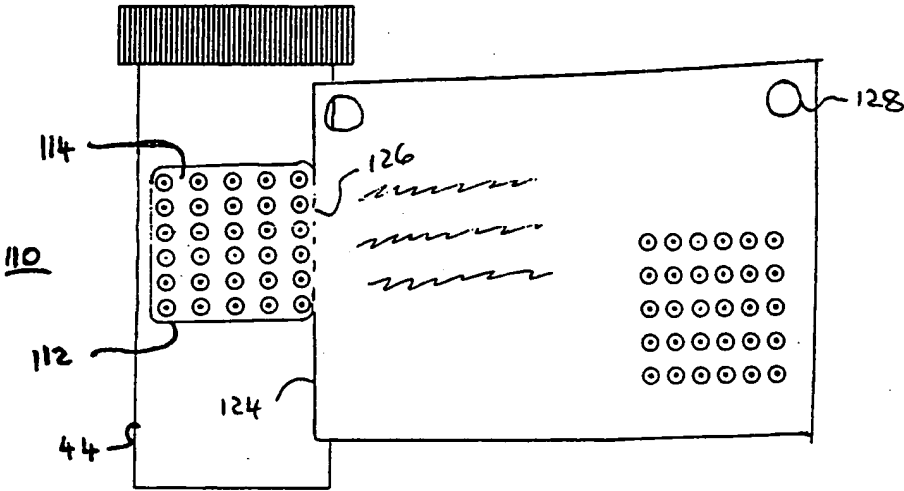


Fig. 23

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US00/09299

<b>A. CLASSIFICATION OF SUBJECT MATTER</b>														
IPC(7) :B65D 39/00, 55/16, 85/00, 83/04; G09F 9/00; G01D 21/00, G09F 3/00														
US CL :Please See Extra Sheet.														
According to International Patent Classification (IPC) or to both national classification and IPC														
<b>B. FIELDS SEARCHED</b>														
Minimum documentation searched (classification system followed by classification symbols)														
U.S. : 40/ 310,311; 116/205, 306, 308, 311, 313, 318-320; 206/459.1, 534; 215/230, 306														
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched														
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)														
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>														
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.												
X — Y	US 5,011,032 A (ROLLMAN) 30 April 1991, col. 3, lines 44 to col.4, lines 46.	1-4,8,20-21, 39-40, 43-44  6, 9-19, 22-24, 36, 41-42												
Y	US 3,392,468 A (WOLF) 16 July 1968, see col. 2.	5, 7												
Y	US 5,765,716 A (CAI et al) 16 June 1998, see abstract.	9-19, 23-24, 29-35, 37-38 41-42												
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.														
<table border="0"> <tr> <td>* Special categories of cited documents:</td> <td>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</td> </tr> <tr> <td>*A" document defining the general state of the art which is not considered to be of particular relevance</td> <td>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</td> </tr> <tr> <td>*E" earlier document published on or after the international filing date</td> <td>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</td> </tr> <tr> <td>*L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</td> <td>*A" document member of the same patent family</td> </tr> <tr> <td>*O" document referring to an oral disclosure, use, exhibition or other means</td> <td></td> </tr> <tr> <td>*P" document published prior to the international filing date but later than the priority date claimed</td> <td></td> </tr> </table>			* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	*A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	*E" earlier document published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	*L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*A" document member of the same patent family	*O" document referring to an oral disclosure, use, exhibition or other means		*P" document published prior to the international filing date but later than the priority date claimed	
* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention													
*A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone													
*E" earlier document published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art													
*L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*A" document member of the same patent family													
*O" document referring to an oral disclosure, use, exhibition or other means														
*P" document published prior to the international filing date but later than the priority date claimed														
Date of the actual completion of the international search		Date of mailing of the international search report												
27 JUNE 2000		19 JUL 2000												
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231		Authorized officer PAUL SEWELL												
Facsimile No. (703) 305-3230		Telephone No. (703) 308-2126												

*Sheila Venev*  
Paralegal Specialist  
Technology Center 3700

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US00/09299

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X — Y	US 5,778,818 A (MARSHALL) 14 July, 1998, see col. 4, line 31 to col. 5, line 59.	25-28 and 45-46 — 29-35 and 37-38
Y	US 5,722,553 A (HOVATTER) 03 MARCH 1998, see abstract.	19, 34-35, 37-38

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US00/09299

A. CLASSIFICATION OF SUBJECT MATTER:  
US CL :

40/ 310,311; 116/205, 306, 308, 311, 313, 318-320; 206/459.1, 534; 215/230, 306